CORE

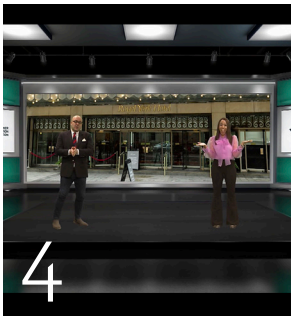
The Voice of Mineral Exploration/Summer 2021

PDAC 2021 CONVENTION A VIRTUAL SUCCESS

PDAC
PROSPECTORS & DEVELOPERS ASSOCIATION OF CANADA

CORE

The Voice of Mineral Exploration
Summer 2021



FEATURES

2
Industry news

4
PDAC 2021 Convention news and highlights

14
Inside the International Mines Ministers Summit

16
In numbers: The economic contribution of the sector

24
In conversation with new PDAC President Alex Christopher

Editorial
Produced by PDAC's Communications Department

800-170 University Avenue
Toronto, Ontario
Canada M5H 3B3
416 362 1969

EDITOR-IN-CHIEF
Cameron Ainsworth-Vincze

DESIGN
Hambly & Woolley Inc.

VISIT US ONLINE
www.pdac.ca
www.twitter.com/the_PDAC
www.facebook.com/thePDAC
www.linkedin.com/company/thepdac
www.instagram.com/the_PDAC

Photo credits:
Anne Belanger
Alex Christopher

CONTRIBUTORS
Laural Adams
Zoe Bell
Alex Christopher
Alison Abbott Franklin
Harriet Han
Jeff Killeen
Felix Lee
Lisa McDonald
Krishana Michaud
Ran Maoz
Nicole Sampson
Steve Shapka
Christina Goncalves Toste

INDUSTRY NEWS

FEDERAL BUDGET 2021

PDAC welcomed measures in the Federal Government's **2021 Budget** that aim to bolster Canada's mineral exploration and development sector's competitiveness and regain its global leadership position. The 2021 Budget recommits to extending timelines for **flow-through share** funds raised in 2019 and 2020, in line with PDAC's recommendation. The government's **proposed legislation** will ensure mineral exploration companies with operations impacted by COVID-19 can avoid penalties that would normally come from not meeting original flow-through share timelines. PDAC is also encouraged by some of the other industry-related commitments in Budget 2021 including:

- $9.6 million over three years to create a Critical Battery Minerals Centre of Excellence at Natural Resources Canada
- $36.8 million over three years to Natural Resources Canada, for federal research and development to advance critical battery mineral processing and refining expertise
- Infrastructure commitments of: $1 billion increase to broadband fund; $1.9 billion reinvest in trade corridors; $6 billion for Indigenous infrastructure, northern roads and alternative energy
- $5 billion over seven years, starting in 2021 to 2022, in the Net Zero Accelerator.

TOWARD A SAFE DAY EVERY DAY REPORT

PDAC, the Association for Mineral Exploration (AME), and Canadian Diamond Drilling Association (CDDA) published the 15th annual **Toward a Safe Day Every Day** report with findings from the Canadian Mineral Exploration Environment, Health and Safety Survey. The 2020 report collected data from 8.9 million hours of work through to the end of 2019, the equivalent of more than 4,500 full-time employees, and marked the eighth consecutive year that the mineral exploration industry's lost-time injury frequency was below the rate for all Canadian industries dropping from 0.61 in 2018 to 0.49 in 2019.

PDAC RESPONDS TO A PUBLIC CONSULTATION ON ACTIVIST SHORT SELLING

In response to a public consultation on activist short selling, **PDAC has identified several issues** for further investigation and provided regulatory and enforcement-related recommendations to the Canadian Securities Administrators (CSA) that aim to level the playing field for all market participants. A key concern is potential market imbalances that could manifest due to limitations of issuers, particularly small and medium-sized companies, to rebut data or information provided to the public by activist short-sellers.

CANADA TO REJECT FUTURE THERMAL COAL PROJECTS

At the G7 meeting in the United Kingdom, Jonathan Wilkinson, Canada's Minister of the Environment and Climate Change, released a public policy statement indicating that the Canadian government will no longer approve thermal-coal mining projects due to their contribution to the climate crisis. "New thermal coal mining projects or expansions are not in line with the ambition Canadians want to see on climate, or with Canada's domestic and international climate commitments," said Minister Wilkinson.

GOVERNMENT MOVES FORWARD WITH FLOW-THROUGH PROMISE

On April 30 the **Federal Government introduced Bill C-30**, which enshrines in legislation the government's promise to temporarily extend the timelines associated with flow-through share expenditures by 12 months. The bill received Royal Assent on June 29 and brings to fruition one of PDAC's main advocacy efforts over the past 12 months.

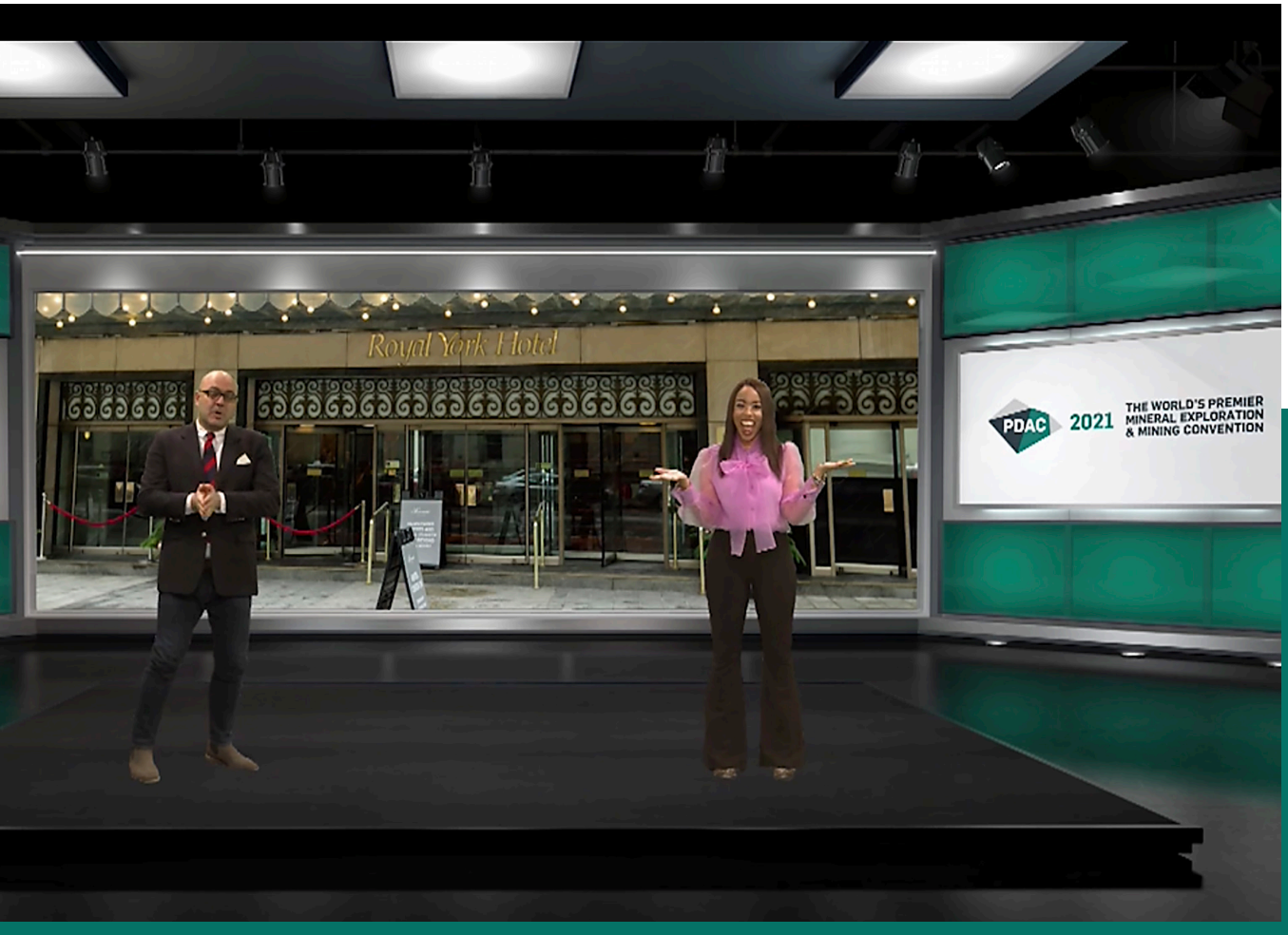
PDAC 2021

GOING VIRTUAL

FOR THE FIRST TIME SINCE 1965, PDAC did not host the world's premier mineral exploration and mining event in downtown Toronto. Back then it was cancelled, and the association almost forced to disband, due to the Ontario Securities Commission pushing to eliminate junior mine financing. This time it was due to the COVID-19 pandemic that swept across the world and impacted our lives in ways we could never have imagined. Yet although attendees could not join us in Toronto in early March the show must—and did—go on as the association brought it directly to attendees in a new, unique way.

The PDAC 2021 Convention was entirely virtual, offering attendees access to a customized platform where they could navigate through various exhibit halls, network with colleagues, and join sessions that were available on-demand shortly after airing. This new virtual format allowed attendees to continue networking by sending direct messages to other participants, engaging through text lounges, and watching educational sessions along with newly added content for three months post-convention.

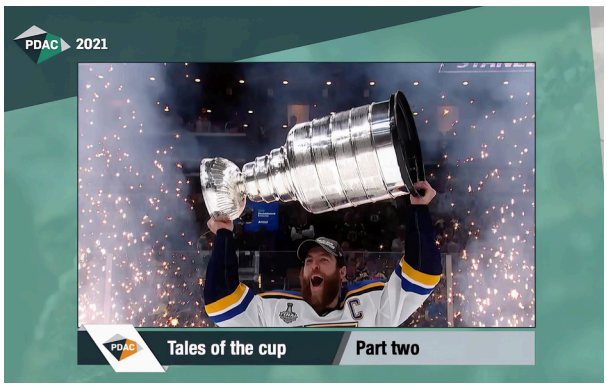
"The 2021 PDAC Convention continued to foster and build industry connectivity, albeit in a new format," said outgoing PDAC President Felix Lee. "Our virtual setting provided access to the broader international mining and exploration community, engaging attendees in the latest industry news, trends, and developments through our extensive programming."



"The 2021 PDAC Convention continued to foster and build industry connectivity, albeit in a new format." **— Felix Lee, Past President, PDAC**

PDAC 2021 HIGHLIGHTS

- Daily Keynote sessions that featured discussions on four key areas: The fate of gold; The economy after COVID-19; Exploring the opportunity; and Kora North deposit, Kainantu Mine, Papua New Guinea.
- Masterclass Series that offered exclusive key insights from industry leaders and sponsors.
- An International Stage that featured presentations from various global mining jurisdictions, including Afghanistan, Argentina, Australia, Canada, Chile, Colombia, Egypt, Greenland, Ireland, Kazakhstan and Peru.
- Reimagined PDAC Awards where recipients were honoured for their excellence in the industry and given their awards at a virtual Awards Gala.
- An in-depth look at the future of space mining, and the mutually beneficial advantages of both space companies and mining sector cooperation.
- A range of virtual entertainment, including: Happy Hour with Trivia and Dueling Pianos; Royal Ontario Museum tour; a Peru Cocktail event; and a selection of program breaks that featured Stanley Cup stories from the Hockey Hall of Fame, tours of the Toronto Zoo, and Indigenous music and dance performances.
- The special Life Member Luncheon honoured PDAC Life Members and the Women's Association of the Mining Industry of Canada (WAMIC) for their significant contributions to PDAC, and the mineral exploration and development community. The event was hosted by PDAC President Felix Lee and included a presentation by Glenn Mullan, President & CEO of Golden Valley Mines and a PDAC Past President, who shared his exciting career journey from early prospecting to running successful exploration and royalty companies. The event also featured a short piano recital performed by the talented young artist Nathaniel Gayah.
- And as the convention wrapped up a changing of the guard took place as Felix Lee handed over the reigns to the association's 38th President, Alex Christopher. PDAC applauds Felix for his dedication and tireless work on behalf of the association, and warmly welcomes Alex in his new role.



EXHIBITS

The largest marketplace of its kind

Exhibitors had customized booths containing downloadable content, company brochures, investor materials and videos.

770
exhibiting organizations

52
exhibiting governments

257,355
total number of booth visits

10,347
total number of exhibitor & sponsor follows/favourites

We welcomed exhibitors from these new countries: Indonesia, United Arab Emirates, Latvia and Eritrea

NETWORKING & MATCHMAKING

Personalized experiences before, during and after the convention!

COMPREHENSIVE FILTERS Attendee directory available for search by name, company, country or other criteria based on attendees' interests and goals

MATCHMAKING After answering a series of questions, the sophisticated matchmaking algorithm suggested:

- Connecting with other like-minded attendees
- Attending sessions that align with attendees' interests
- Visiting exhibitors matching attendees' selected criteria

SOCIAL MEDIA ENGAGEMENT
[Timeframe March 8-11, 2021]

	Facebook	Instagram	LinkedIn	Twitter
Total Engagements	**100,059**	**994**	**2,508**	**2,035**
Inpressions	**2,838,995**	**238,946**	**36,354**	**113,092**

PROGRAMING

CAPITAL MARKETS PROGRAM
The Capital Markets Program provided attendees expert analysis and a forum for dialogue on a range of topics related to mineral industry financing. In total, five sessions took place that explored government support, digitization and innovation, capital markets and the mineral sector, mineral exploration and ESG, and a conversation with Evy Hambro & Mark Bristow hosted by Aline Cote.

CORPORATE PRESENTATION FORUM FOR INVESTORS (CPFI)
CPFI was transformed this year and featured introductions from thought leaders and links directly to Investor Exchange booths. Presentations were grouped by: base and energy materials; diamonds, uranium and silver; gold explorers and producers in North America, South America and around the world; and royalty companies.

CUTTING EDGE
Now in its second year, Cutting Edge showcased innovative and ground-breaking concepts from select organizations. Participants were given five minutes to present, using a slide deck that auto advanced every 15 seconds. In addition, an "ESG Hour" was offered where individuals presented projects that are committed to a low carbon economy, or inclusivity and diversity in the workplace, and ethical business practices.

EXPLORATION INSIGHTS
A high-profile venue where speakers presented on topical subjects in a forum outside the Technical Sessions. Selected from a call for abstracts, topics at PDAC 2021 covered new geological concepts, along with artificial intelligence and machine learning.

INDIGENOUS PROGRAM
A highlight of the PDAC Convention, the Indigenous Program provides a platform for discussion on fostering cooperative, respectful and mutually-beneficial relationships between Indigenous Peoples and the minerals industry. This program brings Indigenous Peoples and Indigenous-owned companies together with the industry and other interested parties to share experiences, exchange ideas and network. Topics discussed this year ranged from lessons learned from Indigenous-led infrastructure projects and the impact of COVID-19, to how to translate corporate values into community engagement with Indigenous and Traditional Peoples.

137
hours of high calibre content across a diverse spectrum of industry topics

514 speakers

35% female speakers

47% international speakers

133,715 total number of session views

26,416 total number of session follows/favourites

34,123 downloads of exhibitor and speaker materials

3,224 polls taken

TOP 5
MOST VIEWED SESSIONS

Commodities keynote:
The fate of gold deposits

Opening ceremonies

Mineral outlook keynote:
The decade after COVID-19

Mineral systems through time:
Improving deposit prediction

Industry highlights and trends post COVID-19

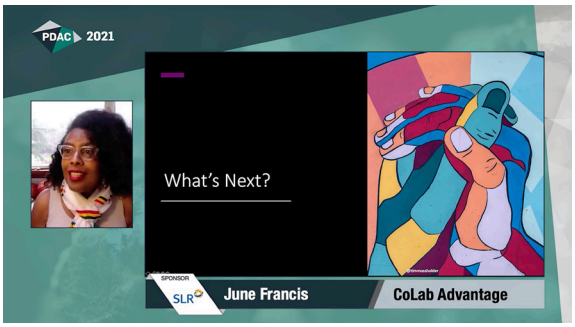
LETTER WRITER PRESENTATIONS FOR INVESTORS
Once again featuring ideas on how to select profitable investments in the resources sector, the theme for this year's session—Combing your brains with out money—included an expansive panel discussion.

MINING FOR DIVERSITY
Women in Mining Canada presented Together: Learning, Growing, Belonging where Trailblazer Award winners were celebrated and attendees participated in panel talks related to the importance of diversity in mining in three key areas:

1. Educate: How to promote cultures and build partnerships with marginalized groups
2. Elevate: Diversity throughout the value chain of an organization: How to promote culture
3. Empower: Retention—Empowering people to grow and lead within an organization

PDAC ONE-ON-ONE MEETING PROGRAM
PDAC again partnered with Precious Metals Summit Conferences, LLC to offer professionally organized one-on-one meetings that brought qualified investors together with senior management. This exclusive program was available only to a select group of PDAC Investors Exchange Exhibitors, and carefully screened, qualified investors and portfolio managers from around the world.

SHORT COURSES
Mineral exploration professionals and students had access to eight Short Courses that covered a variety of topics and subject matter that aimed to heighten their knowledge of mineral exploration science, technology, management and other related issues.



STUDENT & EARLY CAREER PROGRAM
Offering young professionals an opportunity to connect with industry leaders and peers, the Student & Early Career Program featured an array of sessions and events, including Flash Mentoring, a virtual S-IMEW Alumni event, resume review sessions, PDAC-SEG Student Minerals Colloquium, and How to Light up a Room workshops. In addition, hundreds of attendees viewed the finalist presentations, interviews and live awards of the inaugural Frank Arnott - Next Generation Explorers Award (NGEA™). It was a nail-biting finish and the judges presented the first-place winner and recipient of the $5,000 award to the Inca Team. Team UWA finished second and received $3,000, while the CSM Exploration Initiative placed third and received $2,000.

SUSTAINABILITY PROGRAM
Now in its 12th year at convention, the Sustainability Program facilitated multi-stakeholder dialogue and peer-learning on key issues related to responsible exploration and mining. Presentations and dialogue examined the innovative ways in which mineral exploration and mining companies are working to improve their sustainability performance, presenting challenges and successes, as well as lessons learned.

TECHNICAL PROGRAM
A long-standing staple at the convention, industry experts shared insights and presentations on 18 dynamic topics that examined everything from best practices that can be applied to the workplace right away, to timely insights from experts on topics that are currently shaping the industry.

GOVERNMENT INITIATIVES AND ANNOUNCEMENTS

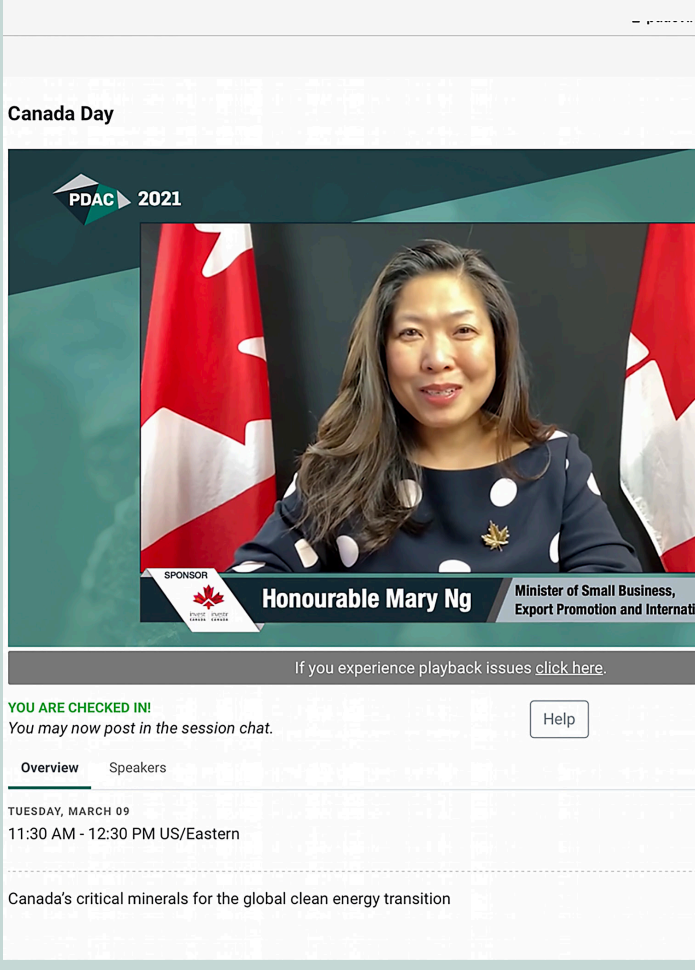
- PDAC hosted a virtual reception for federal parliamentarians with MPs and Senators from across Canada. A test-drive of the PDAC 2021 platform was provided along with highlights of convention programming, as well as facilitated discussions with PDAC's Board of Directors and parliamentarians to engage directly.

- The Ontario government announced development of its provincial Critical Minerals Strategy to help generate investment, increase competitiveness, create jobs in the mining sector, and support Ontario's transition to a low-carbon economy.

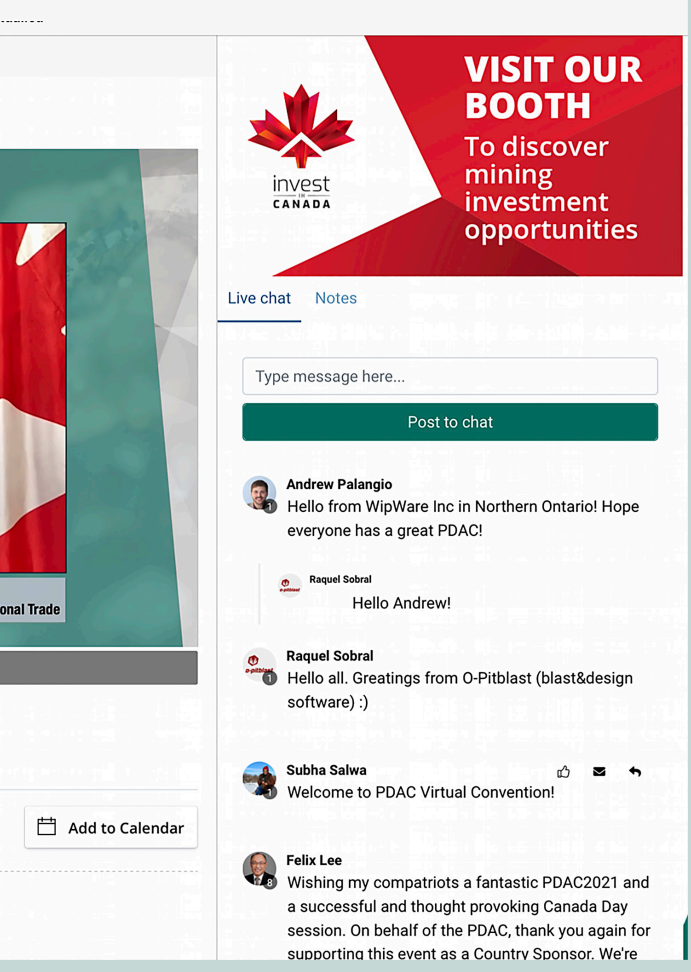
- After a series of consultations between NRCan and PDAC, as well as the Canadian Mineral Industry Federation (CMIF) that began in 2020, PDAC co-hosted the national announcement of the Government of Canada's first-ever critical minerals list along with Minister Seamus O'Regan, during a live press conference.

- Incoming PDAC President Alex Christopher and Executive Director Lisa McDonald participated in an industry roundtable with **Minister Mary Ng** (Small Business, Export Promotion and International Trade), discussing industry-relevant topics such as diversity and inclusion, responsible conduct, as well as innovation and clean technology.

- PDAC once again successfully co-hosted the International Mines Ministers Summit (IMMS) in a virtual format this year, with 26 Ministers from the Americas, Africa, Europe and the Middle East taking part. IMMS gives the global mining community a chance to explore challenges and opportunities, with this year's the discussion focused on ensuring that industry builds back stronger, is aligned with sustainable development priorities, and is ready for future crises.



NEW FOR 2021: All Access pass holders attended the Awards Gala (previously a ticketed event) and connected with the Award recipients via live chat


VISIT OUR BOOTH
To discover mining investment opportunities
invest CANADA
Live chat
Notes
Type message here...
Post to chat
Andrew Palangio
Hello from WipWare Inc in Northern Ontario! Hope everyone has a great PDAC!
Raquel Sobral
Hello Andrew!
Raquel Sobral
Hello all. Greatings from O-Pitblast (blast&design software) :)
Subha Salwa
Welcome to PDAC Virtual Convention!
Felix Lee
Wishing my compatriots a fantastic PDAC2021 and a successful and thought provoking Canada Day session. On behalf of the PDAC, thank you again for supporting this event as a Country Sponsor. We're
Add to Calendar

BROADER ACCESS

Opportunity to join the convention from anywhere in the world

Accessed from your home or office on all mobile and desktop devices

Flexible agenda provided time to attend sessions, visit exhibitors and enjoy entertainment offerings

Ability to **continue making valuable connections** inside the platform for three months post-show until June 1

7,990 convention attendees

412 student attendees

677 investors

152 media

130 self-identified Indigenous attendees

30% attendees from outside of Canada

Outside of Canada, the **top 10 countries** represented: USA, Peru, Australia, United Kingdom, Brazil, Germany, Chile, France, Argentina, Mexico

PDAC 2021 THANK YOU TO OUR SPONSORS

DIAMOND SPONSOR

Teck

PDAC 2021 Diamond Sponsor

PLATINUM SPONSORS

BHP

RioTinto

MINING COUNTRY SPONSORS

Perú

invest IN CANADA | investir AU CANADA

PATRON SPONSORS

nexa

TMX THE FUTURE IS YOURS TO SEE.

VALE

WHEATON PRECIOUS METALS

PDAC 2021 THANK YOU TO OUR SPONSORS

PREMIER SPONSORS

Franco Nevada
The GOLD Investment that WORKS

BMO

SLR

B2GOLD

THE LIND PARTNERS

GOLD PLUS SPONSORS

BARRICK

PearTree

AGNICO EAGLE

CAT

FREEPORT-McMoRan

HUDBAY

IAMGOLD

MAJOR Drilling

Mosaic

PAN AMERICAN SILVER

RBC Capital Markets

NAPIER-REID Since 1950

AngloAmerican

We were thrilled to adapt the PDAC Convention and offer a fully virtual experience to participants for the first time. The PDAC Convention plays a vital role in keeping the global mineral exploration and mining community connected, and that is more important than ever as our members, exhibitors, sponsors, attendees and partners overcome challenges presented by the global health crisis.

Thank you for your ongoing support! LISA MCDONALD, *PDAC EXECUTIVE DIRECTOR*

THE INTERNATIONAL MINES MINISTERS SUMMIT

Bringing the World of Mining Together

Group photo of IMMS at the PDAC 2020 Convention

On March 15, PDAC held the 6th annual International Mines Ministers Summit (IMMS), in partnership with the World Economic Forum, the Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, The Government of Canada, and BMO. Taking place on the margins of the PDAC Convention, IMMS aims to bring together policy makers from around the globe, along with participants from industry and civil society, to discuss a range of topics directly affecting the global mineral exploration and mining sector.

In past IMMS gatherings, themes have addressed issues ranging from sustainability to responsible mineral supply chains, with each theme reflecting the most pressing issues faced by industry over the previous year—and into the foreseeable future. The topic for IMMS 2021 was "Preparing for the Future: Building Resilience in the Mineral Industry". Attendees provided retrospective views of the past year that were heavily impacted by the global pandemic to help focus the engagement on forward-looking actions, effective lessons learned, and how industry can be better prepared for the future.

Following the Chatham House Rules, and with simultaneous translation into French and Spanish, this forum provides a unique opportunity for Ministers responsible for mining from countries around the world to gather in one location for an in-depth discussion on the most pressing issues facing the mineral sector. While the event has been held in person during the PDAC convention in years past, the 2021 IMMS was held virtually for the first time due to the ongoing COVID-19 pandemic. Hosting such a summit in a virtual environment certainly posed a unique set of challenges, but also provided the opportunity for inclusion of jurisdictions that might otherwise have been unable to attend.

The Summit once again kicked off with welcoming remarks from PDAC's President, as well as representatives from the other host organizations, before being turned over to Canada's Minister of Natural Resources, the Honourable Seamus O'Regan, to begin the moderated discussion. For IMMS 2021, Minister O'Regan opened the conversation with remarks outlining how Canada's mineral exploration sector remains a highly-resilient global leader, and noted there is always room for improvement.

IMMS brings together 20 or more Ministers, representing a broad cross-section of international jurisdictions, which in 2021 included representatives from all five continents. The discussion ranged from what individual countries have done over the past 12 months, challenges that have been faced by both policy makers and industry, and offerings of best practice solutions that have had success. These interactions are invaluable in ensuring that mining jurisdictions are fully aware of what is happening on the international stage, and the types of challenges that industry is facing in various regions. Similarly, representatives from civil society are able to bring unique and broad perspectives to broaden government and industry knowledge, and provide helpful context to discussions on issues that can have broad impacts. This robust conversation provides attendees an understanding of the thought processes of their international counterparts, both near and far.

Upon conclusion of the Summit, attendees are able to socialize and network with a closing of the Toronto stock market and a reception. This environment allows Ministers to have direct engagement with other attendees, hear remarks from Canada's Minister of International Trade, and has been an important component in making the event successful over the past six years.

Following each IMMS, a report is generated that outlines the Summit's theme, key points of discussion, as well as potential next steps. This document can serve to help governments and industry to better understand the issues of the day, and what actions they may be able to take to ensure the best possible outcomes for all. You can find past IMMS reports at: **www.pdac.ca/priorities/advocacy/imms**.

Moving forward the IMMS will continue to act as a forum for international mines Ministers to gather annually and hear from industry, civil society and one another. Technological advances have allowed for gatherings such as the IMMS to occur in new ways, and provide opportunities for future IMMS events to grow and evolve. PDAC is honoured to be able to bring together, with our partner organizations, this distinguished group of policy and industry leaders every year, and we greatly look forward to the next iteration of the IMMS in 2022.

THE FOUNDATION OF OUR NATION

To showcase the expansive contribution and impact that Canada's mineral exploration and mining sector has across the country, PDAC researched and compiled data on every province and territory. Here are what the stats tell us.

Stats and figures collected from NRCan and cover the period of 2017 to 2020.

Canada

TOP 10 MINERAL PRODUCTS:

1. Gold, $10.1B
2. Coal, $6.5B
3. Iron Ore, $4.9B
4. Potash, $5.7B
5. Copper, $4.4B
6. Nickel, $3.0B
7. Sand and gravel, $2.3B
8. Diamonds, $2.9B
9. Stone, $2.0B
10. Platinum Group Metals (PGMs), $1.3B

Canada

Canadian exploration and mining companies have mining assets in over 100 countries abroad, worth nearly

$177.8 billion

Canada produces some **60** minerals and metals at **200** mines and **6,500** sand, gravel and stone quarries a year worth nearly **$48 billion**

Domestic exports of mineral and metal products

$106 billion

19% of Canada's domestic export

$2.3 billion

spent on exploration-related activities

Indigenous people make up

12%

of the labour force, and the mineral industry is the top private sector industrial employer of Indigenous peoples

The minerals sector directly employs

392,000 INDIVIDUALS

And indirectly employs an additional

327,000 INDIVIDUALS

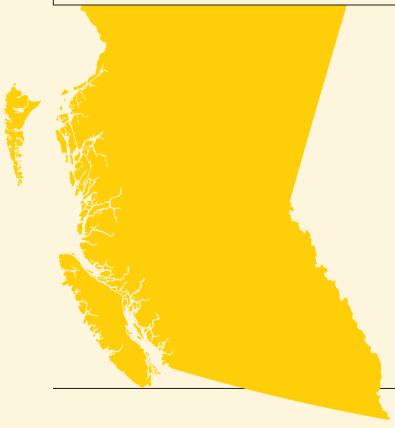
Together, direct and indirect employment exceeds

719,000 JOBS

That's 1 in every 29 jobs in Canada

BRITISH COLUMBIA

A leading centre of expertise for mineral exploration and mining with diverse mineral deposits in every corner of the province.



700 exploration companies are headquartered in British Columbia

In 2017, more than **38,000** people employed in mineral exploration and mining

Mineral employs over **2/3** of all Indigenous people who are employed in the extractives sector

$2.38 billion
Total investment in mineral resource development

$304.7 million
in exploration and
$152.8 million
in deposit appraisals

Exploration and deposit appraisal expenditures grew **17.7%** from 2019 to 2020

ALBERTA

Home to the Western Canada Sedimentary Basin, underlying most of Alberta and containing vast mineral wealth.

$141.8 million
Total investments in mineral exploration development

4.5% of Canadian minerals are produced in Alberta

$2.2 billion
worth of minerals produced

Value of exploration
$24.3 million

Value of deposit appraisal
$25 million

SASKATCHEWAN

Consistently ranked one of the world's Top 10 jurisdictions for investment attractiveness, Saskatchewan is the global leader in potash and uranium production.

Potash contributes **$5.5 billion** to GDP (2017)

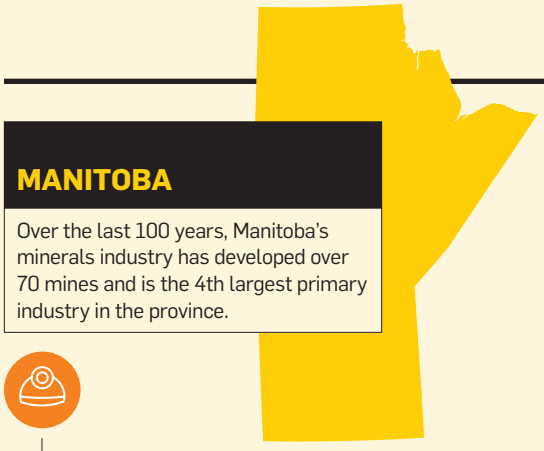
Mineral exploration and mining is the **3rd** largest industry in the province

Mineral exploration and deposit appraisal expenditures
$158.9 million

The value of mining
$6.7 billion

In 2017, more than **18,000 jobs** in the minerals sector

Saskatchewan accounts for **30%** of the world's potash production



MANITOBA

Over the last 100 years, Manitoba's minerals industry has developed over 70 mines and is the 4th largest primary industry in the province.

In 2017, over **10,000 people** employed in mineral exploration and mining

Makes up **37.0%** of the country's zinc output

Produced **3,407 kg** of gold in 2018

Mineral exploration and deposit appraisal expenditures **$56.6 million**

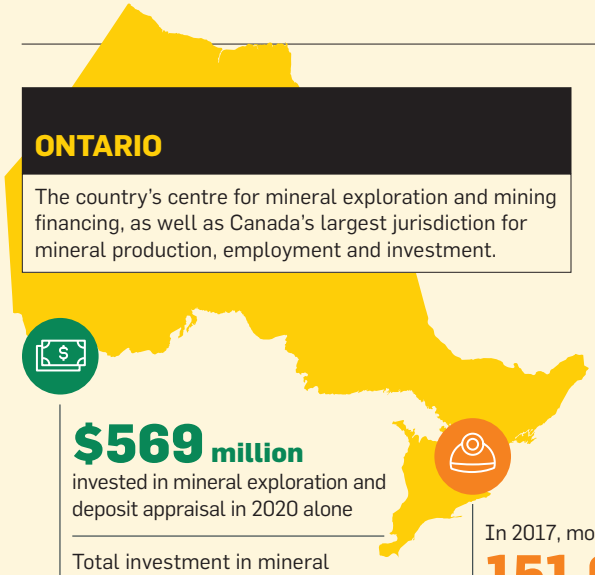
MANITOBA ALSO MAKES UP

7.1% of Canada's nickel

1.9% of Canada's gold

4.6% of Canada's copper

10.6% of Canada's silver



ONTARIO

The country's centre for mineral exploration and mining financing, as well as Canada's largest jurisdiction for mineral production, employment and investment.

$569 million invested in mineral exploration and deposit appraisal in 2020 alone

Total investment in mineral resource development **$3.3 billion** in 2020

The value of mining production in Ontario **$10.7 billion**

In 2017, more than **151,000 people** employed in mineral exploration and mining

Indigenous employment accounts for **11.2%** of mineral exploration and mining jobs in Ontario

253,000 active mineral claims

Over **200** mineral exploration projects

40 mine sites operating in Ontario

On a global level, Ontario ranks among the **TOP 10** regions for exploration spending and production of platinum group metals (PGMs) and nickel

90% of mining GDP stays in Ontario

ONTARIO'S TOP MINERALS:

Gold • Palladium • Platinum
Copper • Zinc • Diamonds
Nickel • Cobalt • Silver
Uranium (refining)

QUÉBEC

One of the top jurisdictions in Canada for exploration and deposit appraisal expenditures.

In 2017, more than **103,000 people** employed in mineral exploration and mining

1/5 of Canada's mining output comes from Québec

Québec is ranked as one of the **TOP 10** jurisdictions in the world for investment attractiveness

Mineral exploration and deposit appraisal expenditures total **$511.2 million**

$2.65 billion Total investment in mineral resource development

PRINCE EDWARD ISLAND

The two major resources of P.E.I. are the soil and the sea. Mineral resources have not been discovered in commercial quantities, although trace deposits of coal, uranium, vanadium and other minerals exist.

116 kilotonnes of sand and gravel produced in 2019

$3.4 million in minerals produced

NOVA SCOTIA

Over the past 300 years, Nova Scotia has supplied more than 20 different mineral products to domestic users and export markets around the world.

NOVA SCOTIA'S TOP MINERALS
Gypsum • Salt
Limestone

In 2017, nearly **230** companies and individuals hold exploration interests (licences or options) in the province

That includes: **3** major, **11** junior, and **66** private companies, plus **148** individuals

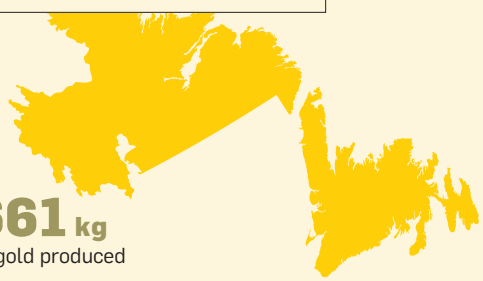
Produced **2,698 kg** of gold in 2019

Mineral exploration and deposit appraisal expenditures **$26.8 million**

3,755 jobs in the minerals sector

NEWFOUNDLAND & LABRADOR

Produces more iron ore than any other jurisdiction in Canada, second only to Ontario in nickel production, and third in copper production behind Ontario and British Columbia.



661 kg of gold produced

40,192 tonnes of nickel produced

$3.5 billion worth of minerals produced

Total investment in mineral resource development **$903.1 million**

Mineral development expenditures totals **$66.8 million**

Value of exploration **$52.2 million**

Value of deposit appraisal **$14.5 million**

NEW BRUNSWICK

New Brunswick's complex geological past has given rise to a diversity of metallic mineral resources.

NEW BRUNSWICK'S TOP MINERALS:
Zinc • Lead
Metal smelting

6,180 jobs in the minerals sector

Mineral exploration and deposit appraisal expenditures **$12.3 million**

In 2019 the value of mineral production **$373.9 million**

YUKON

The Yukon has a rich mineral exploration and mining history dating back to the famous Klondike Gold Rush, and is ranked as one of the Top 10 jurisdictions in the world for investment attractiveness.

Approximately **200** exploration and extraction businesses in the region

Mineral exploration and mining accounts for around **13%** of Yukon's GDP

Of Yukoners working in the goods producing sector, **19.6%** had jobs in the minerals industry

Value of exploration
$64.0 million

Value of deposit appraisal
$11.8 million

Total investment in mineral resource development
$137.9 million

Mining and quarrying businesses revenues in 2016 account for **18.5%** of all Yukon business' gross revenues

NUNAVUT

Representing one-fifth of Canada's land mass, Nunavut has tremendous resource potential and is a place of significant opportunity.

Total investment in mineral resource development
$833.5 billion

Nunavut's mineral exploration and deposit expenditure was
$71 million

Nunavut's total mining production for 2019 is estimated at
$1.315 billion, up $151 million (13%) from 2018

OF THIS
Gold production value is
$850 million
Iron ore is projected at
$463 million
Silver production value is
$2.0 million

NORTHWEST TERRITORIES

With three operating mines, the N.W.T. is the country's dominant source of diamonds.

Total estimated mining production in 2019 valued at
$1.82 billion

$144.4 million
Total investment in mineral resource development

Click here for infographics in French and Spanish

IN CONVERSATION WITH PDAC'S 38TH PRESIDENT ALEX CHRISTOPHER

PDAC's new President shares his vision for the association and the minerals sector, the importance of access to land and permitting timelines, and how the sector needs to adapt—and evolve—in these volatile times.

Q
A

When the PDAC 2021 Convention ended, your two-year term as President of the association commenced. How are you feeling as you start your presidency during a time when the sector is starting to recover from the COVID-19 pandemic?
Firstly, I would like to say that PDAC is a great organization to be associated with and I think it does a tremendous job of supporting our industry, both within Canada and abroad. I certainly never expected to be dealing with what we all hope is the tail end of the COVID-19 pandemic—one of the most impactful black swan events of our generation. I am optimistic that we will put COVID-19 in the rear-view mirror during my term as President and, given the resiliency and entrepreneurship within our sector, I expect we will come out stronger as a group and better positioned as an industry. I believe that events like COVID-19 drive collaborative, innovative and creative solutions that only serve to strengthen our industry in the long run.

Q
A

You've been associated with PDAC for a number of years. Tell us about your various volunteer roles within the industry and how you got started with the PDAC.

I have been a regular attendee of the PDAC Convention since the early 1980's, and although I moved to B.C. in the mid-90's I continued to attend, leading Teck's participation and sponsorship for over 25 years. I spent several terms on the Board of the Association for Mineral Exploration British Columbia (AME), including time on the Finance Committee, Nominating Committee and Executive Committee where I served as Vice Chair, and then I shifted my industry volunteer efforts to PDAC as I took on the leadership of Teck's global exploration group. Since joining the PDAC Board in 2013, I have been active on a number of committees, including the Governance and Nominating Committee and the Executive Committee. I think it's important to give back to an industry that has given us so much over our careers, and I encourage others to do the same.

What are some of your specific goals for the association and industry as a whole that you wish to achieve as PDAC President?

My focus during my term as President is to ensure we continue to foster and support a competitive mineral exploration and development industry in Canada, and continue to deliver against PDAC's strategic objectives. Leadership in terms of environmentally and socially responsible practice is one key focus area, and we will continue to provide leadership and support for our members and stakeholders to encourage our industry to continue to build mutually-beneficial relationships. There are many other strategic objectives for the PDAC, and I think key to successful delivery is focus and ensuring we don't try to be everything for everyone.

You're an exploration geologist by background. How has exploration changed since you first started working in the sector?

Those of us who are old enough to have lived through the sweeping changes in the world over the last 40 years have experienced a significant shift in how exploration programs are planned, permitted and executed. Evolving priorities related to sustainable practice, stakeholder engagement and the application of new technologies now leads us to invest more time and relative expenditures to test a target or concept in an environment where discovery success has been dropping as we look deeper and further afield.

Over the course of your career, what major developments do you feel have played a pivotal role in making Canada's mineral exploration and mining sector a global powerhouse?

I would say there are three things that resonate here which are all direct results of government policy and approach, and these are on top of Canada's natural mineral endowment. First is the strength of our junior mining industry and the ability to finance exploration activities, driven by both our highly effective equity markets and flow-through funding. Second is our mineral tenure system and the open access to land that has required in-the-ground expenditures to advance tenure and promotes active exploration of mining claims. And third is our requirement to file exploration results publicly, allowing others to build off the work that has come before and ensuring new dollars are not just repeating the prior work which often adds little value.

How can juniors, and even mid-tier to large companies, succeed in today's unpredictable and volatile economic climate?

Good question. I think we need to consider what success looks like in our industry and understand that the historic economic climate has been as unpredictable and volatile as it is today. So, the economic challenges are not new and the industry has been very successful navigating this area over the years. However, the evolving regulations and expectations create more complexity and lead time in everything we do and, although this evolution has been happening over decades and is not new, the ability to adapt to these needs and the ability to manage the economic impacts of the additional requirements requires thoughtful, innovative and collaborative solutions.

Q
A

What is one specific thing you feel could be done to improve Canada's mineral exploration and mining industry?
Clarity and certainty with respect to access to land and permitting timelines are key to ensuring we maintain a robust exploration industry in Canada. As I noted earlier, the business has evolved as expectations have changed, yet there needs to be the right balance to ensure the jobs and benefits from the products we produce continue to flow, and this will only happen if the Canadian people truly understand our business and recognize the need to create this balance for the long-term.

Q
A

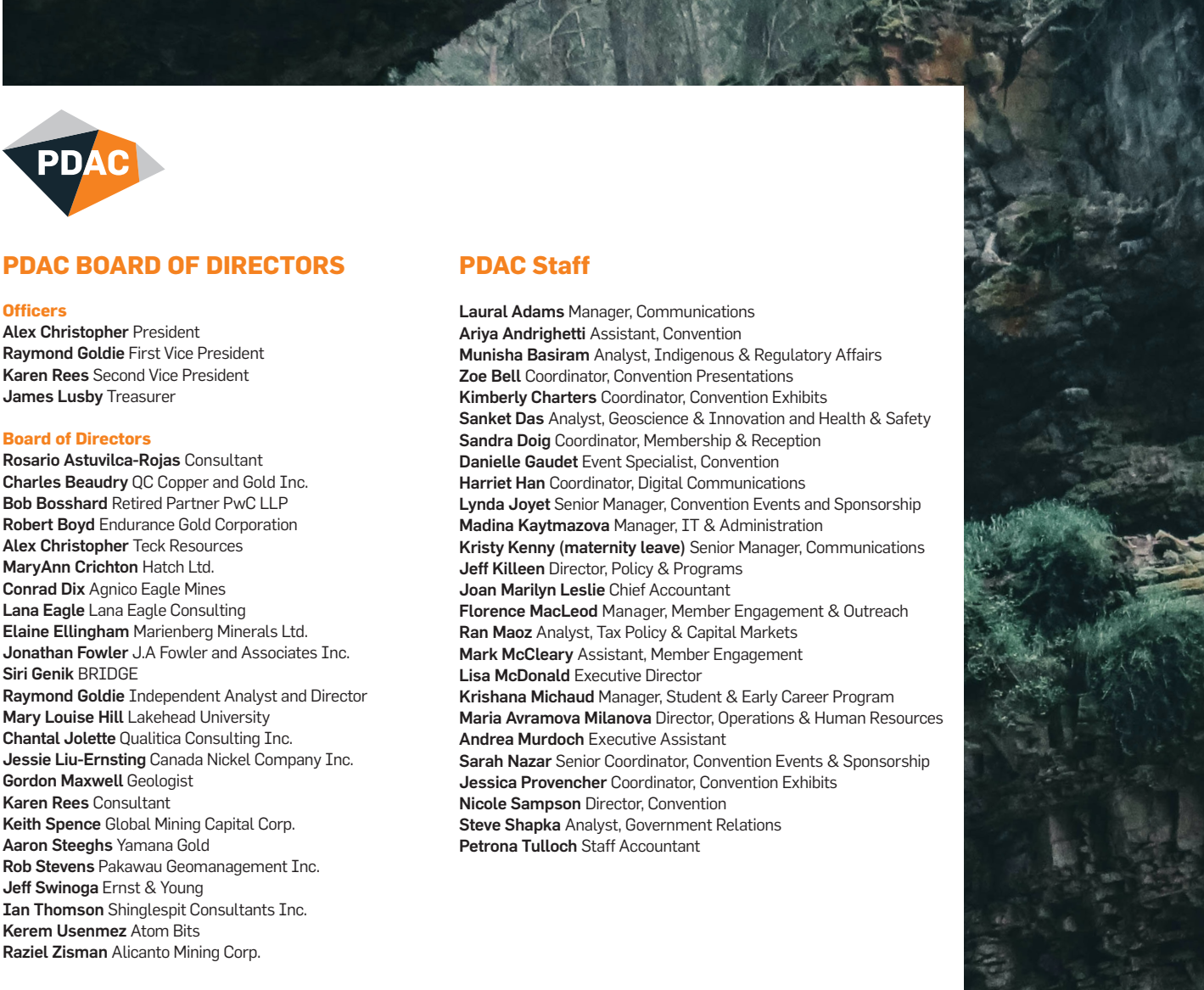
If you could choose one place to explore in Canada where would it be, and why?
This is a really tough question for me. I will speak to it not from an endowment, mineral prospectivity or policy point of view, but from a field experience point of view. We have such a beautiful and diverse country that it gives the people in our industry not only a wonderful opportunity to see Canada's beautiful landscapes and diverse wildlife, but also an opportunity to interact with local communities and experience the cultural differences across Canada. At one point of time or another I have worked in almost every province and territory. Maybe it is because my first field season was on the tundra in northern Canada but I see this as one place that people should take the opportunity to visit, as it is truly spectacular and rivals the high alpine and glacier vistas of the west coast.

Q
A

In looking back on your career, what is your fondest memory?
It's a real challenge to just select one memory as there are so many fond memories and experiences, and these are what make this career so rewarding. There are the discovery, industry and corporate highlights that are exciting and fulfilling. But it is the people we work with and the relationships we develop that create lifelong connections, and brothers and sisters for life, by sharing even a single field season that bring back the fondest memories.

Q
A

The sector needs a new wave of talent to fill a potential labour shortage. What can industry do better to encourage new graduates and early career individuals to pursue a career in mineral exploration and mining, and why should they?
This isn't a new challenge and in the 40+ years since I started university our industry has struggled with attracting and retaining talent, which is even more challenging in the exploration sector as it is much more cyclical than the mining side of the industry. Three critical factors that I see here are: (1) ensuring exposure to the true nature of our industry in our school system so the students are aware of the high tech and progressive nature of the industry across all disciplines; (2) ensuring we stay competitive with other sectors with respect to wages and benefits and creating a balanced lifestyle for employees, as we all recognize the travel and field components of our industry impact attraction and retention; and (3) figuring out a way to remove the impact of the boom/bust cyclicity of our industry in order to provide a more stable labour market.



PDAC BOARD OF DIRECTORS

Officers

Alex Christopher President
Raymond Goldie First Vice President
Karen Rees Second Vice President
James Lusby Treasurer

Board of Directors

Rosario Astuvilca-Rojas Consultant
Charles Beaudry QC Copper and Gold Inc.
Bob Bosshard Retired Partner PwC LLP
Robert Boyd Endurance Gold Corporation
Alex Christopher Teck Resources
MaryAnn Crichton Hatch Ltd.
Conrad Dix Agnico Eagle Mines
Lana Eagle Lana Eagle Consulting
Elaine Ellingham Marienberg Minerals Ltd.
Jonathan Fowler J.A Fowler and Associates Inc.
Siri Genik BRIDGE
Raymond Goldie Independent Analyst and Director
Mary Louise Hill Lakehead University
Chantal Jolette Qualitica Consulting Inc.
Jessie Liu-Ernsting Canada Nickel Company Inc.
Gordon Maxwell Geologist
Karen Rees Consultant
Keith Spence Global Mining Capital Corp.
Aaron Steeghs Yamana Gold
Rob Stevens Pakawau Geomanagement Inc.
Jeff Swinoga Ernst & Young
Ian Thomson Shinglespit Consultants Inc.
Kerem Usenmez Atom Bits
Raziel Zisman Alicanto Mining Corp.

PDAC Staff

Laural Adams Manager, Communications
Ariya Andrighetti Assistant, Convention
Munisha Basiram Analyst, Indigenous & Regulatory Affairs
Zoe Bell Coordinator, Convention Presentations
Kimberly Charters Coordinator, Convention Exhibits
Sanket Das Analyst, Geoscience & Innovation and Health & Safety
Sandra Doig Coordinator, Membership & Reception
Danielle Gaudet Event Specialist, Convention
Harriet Han Coordinator, Digital Communications
Lynda Joyet Senior Manager, Convention Events and Sponsorship
Madina Kaytmazova Manager, IT & Administration
Kristy Kenny (maternity leave) Senior Manager, Communications
Jeff Killeen Director, Policy & Programs
Joan Marilyn Leslie Chief Accountant
Florence MacLeod Manager, Member Engagement & Outreach
Ran Maoz Analyst, Tax Policy & Capital Markets
Mark McCleary Assistant, Member Engagement
Lisa McDonald Executive Director
Krishana Michaud Manager, Student & Early Career Program
Maria Avramova Milanova Director, Operations & Human Resources
Andrea Murdoch Executive Assistant
Sarah Nazar Senior Coordinator, Convention Events & Sponsorship
Jessica Provencher Coordinator, Convention Exhibits
Nicole Sampson Director, Convention
Steve Shapka Analyst, Government Relations
Petrona Tulloch Staff Accountant

CORE

The Voice of Mineral Exploration
Summer 2021